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DATE MAILED: 01/28/2005

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,951	07/08/2003	Myeong-Jin Lee	SAM-0433	7111
7590 01/28/2005		EXAMINER		
Anthony P. Onello, Jr.			NGUYEN, TANH Q	
MILLS & ONELLO LLP Eleven Beacon Street, Suite 605			ART UNIT	PAPER NUMBER
Boston, MA 02108			2182	

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)				
	10/614,951	LEE ET AL.				
Office Action Summary	Examiner	Art Unit				
	Tanh Q. Nguyen	2182				
Th MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the co	correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1: after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period of Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be tin y within the statutory minimum of thirty (30) day vill apply and will expire SIX (6) MONTHS from , cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1)⊠ Responsive to communication(s) filed on <u>08 Ju</u>	uly 2003 and 15 October 2004.					
2a) ☐ This action is FINAL . 2b) ☑ This	_					
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
 4) Claim(s) 1-11 is/are pending in the application. 4a) Of the above claim(s) is/are withdray 5) Claim(s) is/are allowed. 6) Claim(s) 1,2 and 7 is/are rejected. 7) Claim(s) 3-6 and 8-11 is/are objected to. 8) Claim(s) are subject to restriction and/o 	wn from consideration.					
Application Papers	•					
9)⊠ The specification is objected to by the Examine	Г.					
10)⊠ The drawing(s) filed on <u>08 July 2003</u> is/are: a)⊠ accepted or b)⊡ objected to by the Examiner.						
Applicant may not request that any objection to the	drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).				
Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Ex		• •				
Priority under 35 U.S.C. § 119						
a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage				
Attachment(s)						
Notice of References Cited (PTO-892)	4) Interview Summary	(PTO-413)				
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/15/04.	Paper No(s)/Mail Da					

DETAILED ACTION

-Specification

1. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claims 1-11 are objected to because of the following informalities:

"by" in claim 1, line 6 should be replaced with "to" to be consistent with claim 2, line 3.

"by" in claim 3, line 10 should be replaced with "to" to be consistent with claim 2, line 3.

"by" in claim 8, line 20 should be replaced with "to" to be consistent with claim 2, line 3.

Claim 10, line 4 recites "a third comparing circuit" without inclusion of "a second comparing circuit". It appears that applicant meant for claim 10 to depend on claim 9 instead of claim 8 - as claim 9 recites "a second comparing circuit".

Claim 11, line 3 recites "a second register" and line 4 recites "a fourth comparing circuit" without inclusion of "a first register", "a second comparing circuit", and "a third comparing circuit". It appears that applicant meant for claim 11 to depend on claims 9 and 10, instead of claim 8 - as claim 9 recites "a second comparing circuit", and as claim 10 recites "a first register" and "a third comparing circuit".

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Claims 2-6 are objected to because they depend on claim 1. Claims 4-6 are objected to because they depend on claim 3. Claims 9-11 are objected to because they depend on claim 8.

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 5. Claims 1, 2, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (USP 5,546,543) in view of Brown et al. (USP 6,397,287).

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6. As per claim 1, Yang teaches a method of controlling at least one of a transmitting buffer [220, FIG. 2] and a receiving buffer [210, FIG. 2] of a network controller [20, FIG. 2], comprising:

receiving at least one request for access of a system bus [15, FIG. 2] from the transmitting buffer and the receiving buffer [col. 4, lines 6-9]; and

determining an **occupancy level** of data in the transmitting buffer [investigate whether the number the amount of data resident in the transmit buffer is greater than a second threshold level (col. 4, lines 15-17), hence determining an occupancy level of data in the transmitting buffer] and a **vacancy level** of data in the receiving buffer [inquire whether the number of empty data byte locations is greater a first threshold level (col. 4, lines 12-14), hence determining a vacancy level of data in the receiving buffer] and granting access to the system bus to the transmitting buffer or the receiving buffer based on the determination result [col. 4, lines 10-22; col. 6, lines 32-39].

Yang, therefore, teaches the claimed invention except for determining a vacancy level (<u>instead of an occupancy level</u>) of the data in the transmitting buffer and an occupancy level (<u>instead of a vacancy level</u>) of data in the receiving buffer.

Brown teaches for a transmitting buffer of a given size, the vacancy level (TxFree) and the occupancy level (TxUsed) being complementary and may be inferred from one register value [col. 11, line 66-col. 12, line 9]; and for a receiving buffer of a given size, the vacancy level (RxFree) and the occupancy level (RxUsed) being complementary and may be inferred from one register value [col. 14, lines 28-38].

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to infer the occupancy level of data in the transmitting buffer (having a given size) from the vacancy level of data in the transmitting buffer when the one register value of the transmitting buffer corresponds to the vacancy level of data in the transmitting buffer, as is taught by Brown - hercedetermining the vacancy level of data in the transmitting buffer in the process, and to infer the vacancy level of data in the receiving buffer (having a given size) from an occupancy level of data in the receiving buffer when the one register value of the receiving buffer corresponds to the occupancy level of data in the receiving buffer, as is taught by Brown - hercedetermining the occupancy level of data in the receiving buffer in the process, in order to grant access to the system bus (i.e. to use the determination result to grant access to the system bus to the transmitting buffer or the receiving buffer).

- As per claim 2, Yang teaches granting access to the system bus comprising receiving the request for access to the system bus from one of the transmitting and receiving buffers and granting access to the system bus to the one of the transmitting and receiving buffers sending the request [col. 3, lines 46-48].
- 8. <u>As per claim 7</u>, Yang, in combination with Brown, teaches the method for controlling a transmitting and a receiving buffer of a network controller, hence teaches a program for executing the method using a computer, the program inherently being recorded on a computer readable recording medium for execution on a computer.

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Allowable Subject Matt r

9. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and including amendment to overcome the objections set forth in this Office action.

- 10. Claims 8-11 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.
- 11. The following is a statement of reasons for the indication of allowable subject matter:

the prior art, individually or in combination, does not teach comparing the occupancy level of data in the receiving buffer with the vacancy level of data in the transmitting buffer based on a determination result, and granting access to the system bus to one of the transmitting buffer or the receiving buffer based on the determination result.

the prior art, individually or in combination, does not teach a first determination circuit for determining if the occupancy level of the receiving buffer is increasing, and outputting a result of the determination as a first signal; a second determination circuit for determining if the vacancy level of the transmitting buffer is increasing, and outputting result of the determination as a second signal; a comparing circuit comparing the vacancy level of the transmitting buffer with the occupancy level of the receiving buffer and outputting a comparison result; and a logic circuit outputting a permission

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signal to the receiving buffer or the transmitting buffer in response to the first signal, the second signal, and the comparison result, the permission signal granting access to the system bus to one of the transmitting buffer and receiving buffer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Quang Nguyen whose telephone number is (571) 272-4154 and whose e-mail address is tanh.nguyen36@uspto.gov. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached on (571) 272-2100. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for After Final, Official, and Customer Services, or (571) 273-4154 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

Effective May 1, 2003 are new mailing address is:

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Effective December 1, 2003, hand-carried patent application related incoming correspondences will be to a centralized location.

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